RubberWorld

The technical service magazine for the rubber industry

Volume 197 No. 6 March 1988

Profile extrusion • Process control evaluation

Peroxide crosslinking vs sulphur vulcanization

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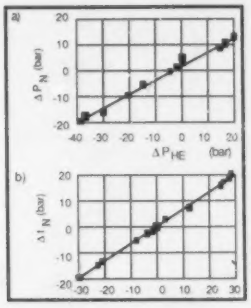

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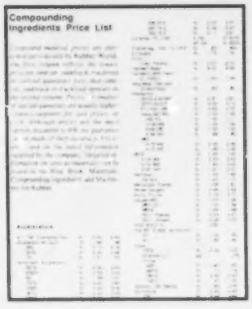

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Editorial

In recent years the cry from business to get government off its back has found many a sympathetic ear from the general public. In fact, Ronald Reagan's popularity can somewhat be attributed to his promise to do just that. And in the wake of this popularity, little is heard from those who want to put more governmental control on business. The claims from business is that regulations aren't needed, make us less competitive in the world market and all the work involved in complying with regulations is counterproductive. And the general public, aware of the excesses of big government, have lent their support to the business cause. But those days may be coming to an end, and it's not because the public thinks that putting more regulations on business is such a good idea. It's because business is giving off the perception that it can't control itself. Some recent actions by companies in various industries are going to bring about a demand from the people to put more government on the back of business, and when you think about it, business asked for it.

There are companies that do defense work that routinely falsify work records, pad bills and try to find out any way they can to get paid more money than is due them. They don't call it stealing, yet they demand the government go after welfare cheats who in a lifetime couldn't come close to the money they're ripping off from the government. There are companies who falsify safety records, disregard safety compliance laws and various other regulations that not only put their workforce in danger, but the general public as well. One of the worst examples of business disregard happened recently when a fuel storage tank ruptured on the Ohio River spilling fuel into the water, contaminating water supplies. Next to something like Bhopal, this is insignificant. Whether the companies involved didn't follow correct safety procedures is not the point here either. They purposely didn't try to injure anyone. But after the spill on the Ohio, companies knowingly and willingly dumped toxic chemicals into the river. According to the EPA, these companies were taking advantage of the mishap to rid themselves of waste to save money on disposal!

What's interesting about this is that there has been very little outcry from the business community condemning this act, which legally could be construed as attempted assault, if not homicide. There can be no justification for acts like these, and according to the EPA, it's not the first time that something like this has happened. It's bad enough that many feel industry pollutes the environment within the federal regulations, now we have industry purposely dumping carcinogens. The backlash and repercussions from this could put a real crimp on your business, whether you've generated any toxic waste or not. We're not attempting to paint all of industry as villains because a minority segment has such little regard for the quality of life and the environment. But this taints everyone in industry and a real effort should be made by the leaders in industry to put an end to such actions. If you don't want to do it because of your concern for the people and the environment, do it because the costs of the resulting regulations that will be imposed are prohibitive to remaining competitive.

Don R. Smith
Editor

RubberWorld

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Business Briefs

Acquisitions, expansions

Bridgestone Corp. has agreed to acquire 75% of **Firestone Tire.** Firestone will retain 25% of the company that will continue to use the Firestone name and will be headquartered in Akron, OH. The parties intend to establish supply and sourcing agreements covering tires that will be sold by the new company to Firestone's continuing automotive service business, and raw materials that will be sold by Firestone's continuing diversified products businesses to the new company.

Prior to this announcement, Bridgestone said it intends to relocate its corporate headquarters from Torrance, CA to Nashville, TN, near the company's tire manufacturing plant in LaVergne, TN.

Dow Chemical is spending $9 million to modernize its seven styrene-butadiene latex plants in North America. The program will further enhance product quality as well as achieve greater product uniformity.

JMK International is constructing a $2 million center dedicated to the application development of high performance silicone compounds and products for the automotive, appliance, construction and other markets in Weatherford, TX. The facility, which is expected to be completed in June, will also test and evaluate other elastomers which have potential to be key and complimentary to silicone in the development of future products.

RMA tire report through October (figures in thousands of units)

Passenger tires	YTD '87	YTD '86	% change
Shipments			
original equipment	49,316	50,626	-2.59
radial	41,901	42,599	-1.64
replacement	139,329	133,367	4.47
radial	125,385	115,429	8.63
export	5,370	3,696	45.29
radial	4,679	2,844	64.52
total	194,015	187,589	3.37
radial	171,965	160,872	6.90
Production	153,907	146,743	4.88
radial	135,695	124,472	9.02
Truck & bus tires			
Shipments			
original equipment	7,264	6,357	14.27
radial	5,071	4,273	18.68
replacement	31,738	29,938	6.01
radial	17,351	14,459	20.00
export	1,878	1,184	58.61
radial	1,340	706	89.80
total	40,880	37,479	9.07
radial	23,762	19,438	22.25
Production	32,642	28,363	15.09
radial	18,533	14,014	32.25

Witco Corp. expanded production capacity by 40% for urethane dispersions at its Organics Division's Chicago, IL plant complex. The company also added state of the art laboratory equipment to perform critical measurements and evaluations of materials used in development and quality control.

Southern Clay Products is expanding its organoclay production facility in Gonzales, TX. The multi-million dollar expansion is expected to be completed in July and will increase capacity of existing rheological additive products and provide capabilities for new products.

Vulcan Equipment, a manufacturer of machinery for the tire retread and repair industry, acquired a third manufacturing facility in Toronto.

ICI Polymer Additives has installed advanced injection molding equipment at its Everberg, Belgium R&D laboratories. The equipment will facilitate the development of improved additives.

Ferro Corp., Cleveland, OH, acquired the assets of **Canadian Plastics Concentrates Ltd.**, Petrolia, Ontario.

Hanson Industries sold its Southern Resin adhesive facility in Thomasville, NC to **Southern Resin Inc.** a newly-formed corporation. Southern Resin manufactures

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Business Briefs

urea-formaldehyde adhesives.

Royal Rubber and Manufacturing, South Gate, CA is undergoing a $3 million building expansion program and will make a major commitment to the automotive market with its floor mats.

Contracts, licenses

Thermoplastic natural rubber developed by the **Malaysian Rubber Research and Development Board** and the **Malaysian Rubber Producer's Research Association** will be manufactured in the United States by **Teknor Apex**, Pawtucket, RI and in Great Britain by **Vitacom Ltd**. These rubbers are partially dynamically vulcanized blends of Standard Malaysian Rubber and polypropylene.

Neville Chemical, Pittsburgh, PA appointed **A.T. Callas Co.**, Troy, MI as a manufacturers representative for its line of hydrocarbon resins, plasticizers and antioxi-

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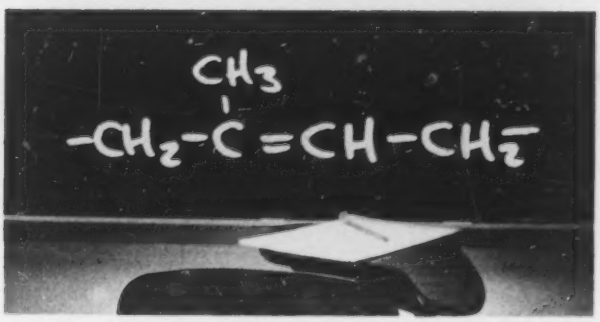


The Rubber Division is dedicated to an idea: For polymer scientists, engineers and technicians, a career is a lifelong learning process.

And today in the broad field of rubber chemistry, the life of the technological information core upon which you base your career is estimated to be less than 5 years.

Where professional advancement is concerned, not to mention improved technical competence or even familiarization with techniques and terms for beginners, the value of the Rubber Division's extensive educational programs is inestimable. (In more than 20 years, some 15,000 people have taken the courses at all levels.)

Devised in cooperation with university professors, there are correspondence and classroom courses in Basic, Intermediate and Advanced Rubber Technology. Also provided are opportunities to attend frequent teaching symposia and workshops, and participants have unlimited access to technical papers.

For more information, write to: Education Committee, Rubber Division, ACS, The University of Akron, Akron, Ohio 44325 or call 216-375-7814 (Telex: 986434)

RUBBER DIVISION

RMA rubber report through November (figures expressed in metric tons)

	YTD '87	YTD '86	% change
Total new rubber			
New rubber available	2,978771	2,78,231	6.95
Imports	991,476	947,152	4.68
Exports	458,161	359,920	27.30
Apparent consumption	2,550,272	2,431,889	4.87
Total natural rubber			
Imports	730,436	712,615	2.50
Exports	33,282	34,228	-2.76
Apparent consumption	706,445	692,374	2.03
% total new rubber	27.70	28.47	
Total synthetic rubber			
Production	1,987,295	1,838,079	8.12
Imports	261,040	234,537	11.30
Exports	424,879	325,692	30.45
Apparent consumption	1,843,827	1,739,515	6.00
Total SBR			
Production	772,772	717,313	7.73
Imports	77,417	89,615	-13.61
Exports	158,753	101,970	55.69
Apparent consumption	709,475	710,618	-.16
Total nitrile			
Production	61,800	55,440	11.47
Imports	14,591	11,021	32.39
Exports	12,384	10,928	13.32
Apparent consumption	61,461	56,351	9.07
Polybutadiene			
Production	338,459	306,198	10.48
Imports	6,285	54,013	39.03
Exports	43,231	20,687	168.90
Apparent consumption	190,482	333,755	8.17
Ethylene-propylene			
Production	231,459	214,900	7.71
Imports	6,285	4,325	45.32
Exports	43,231	41,199	4.93
Apparent consumption	190,482	171,962	10.77
Butyl, polychloroprene, polyisoprene, silicone and other synthetic elastomers			
Production	582,988	544,228	7.12
Imports	87,652	75,563	16.00
Exports	154,883	150,908	2.63
Apparent consumption	521,383	466,828	11.69

Business Briefs

dants.

Astor Wax Corp., Harrison, NY appointed **Mid-States Resins and Chemicals**, Chicago, IL, as sales representatives for its complete line of anti ozone waxes and lubricants.

Financial statements

Armtek Corp. reported a net income of $20.5 million for 1987 on sales of $1.19 billion.

Carlisle Companies had net earnings in 1987 of $18.8 million on sales of $542.7 million.

Cooper Tire reported 1987 net income of $30.7 million on sales of $665.8 million.

Firestone reported first quarter net income of $30 million on sales of $976 million.

Goodyear reported 1987 net income of $770.9 million on sales of $9.9 billion.

M.A. Hanna Co., Cleveland, OH had a net income of $36.3 million in 1987 on revenues of $496.7 million.

Park-Ohio Industries reported a net loss of $3.07 million on sales of $134.5 million.

Rubbermaid Inc. reported 1987 earnings were $84.5 million on sales of just over $1 billion.

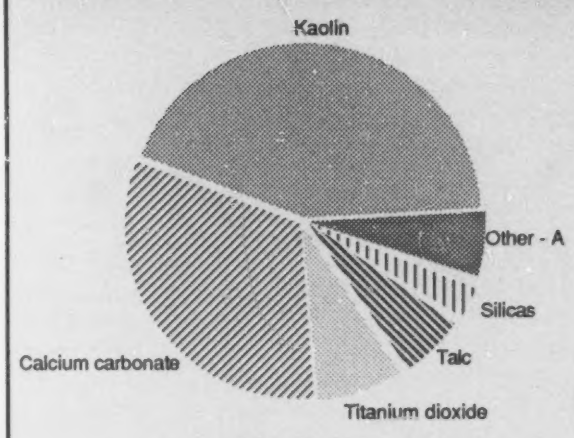
USG Corp. had 1987 net earnings of $204.2 million on sales of $2.8 billion.

Markets, news

The International Institute of Synthetic Rubber Producers in their five year forecast for Western Europe indicate that slow growth or even a slight decline in synthetic rubber consumption can be expected due to the current economic climate. The IISRP says that capacities in the region remain well in excess of the expected consumption. For 1987, Western European synthetic rubber consumption was estimated to have risen 2.1% to 1.8 million metric tons. The group predicts an increase of 1.3% for 1988. With an annual growth rate pegged at 1.1% for the next five years, the IISRP sees consumption reaching nearly 2 million tons in the region. The growth rate for specialty rubbers during the period is expected to be 6.7% per year. Although thermoplastic elastomers are not included in the consolidated figures for synthetic rubber, the IISRP estimates TPEs now account for 7 1/2% of total rubber consumption in Western Europe. With a growth rate of 4.5% per year, TPEs are expected to reach about 10% of total new rubber consumed by 1992.

Consumption of extender and filler minerals in rubber reached $180 million in 1987 according to a Kline & Co study. Consumption in the adhesives and sealants industry was listed at $105 million and was marked as the second fastest for growth, behind plastics. Kaolin and calcium carbonate are the two dominant minerals used in North American extender and filler applications.

North American extender and filler mineral consumption by product



10.9 million tons

A - includes alumina hydrate, attapulgite, baryte bentonite, diatomite, feldspar, gypsum, mica, nepheline syenite and wollastonite.

IISRP Western Europe new rubber consumption forecast (all figures in thousands metric tons)

	1986 actual	*1987 est.*	*1988*	*1992*	*1987 % tire/ tire prod.*
Styrene butadiene - dry	605	612	618	640	67
Styrene butadiene - latex	110	115	110	105	5
Carboxylated SBR latex	310	335	345	370	- -
Polybutadiene	236	240	244	257	72
Ethylene - propylene	162	170	175	195	- -
Nitrile - solid & latex	80	81	82	85	- -
Polychloroprene	82	81	81	77	- -
Other synthetic (1)	222	216	220	244	56
Total synthetic	1807	1850	1875	1973	35
Natural rubber	903	945	955	980	66
Total new rubber	2737	2795	2830	2953	45
% synthetic	66	66	66	67	- -

(1) includes butyl and polyisoprene